REMARKS

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the second, non-final Office Action of December 17, 2008 in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the claims of the application have been amended to more clearly patentably define the subject invention. It is believed that the claims which are now pending in the subject application are patentable over the prior art cited and relied on, taken either singly or in combination. Reexamination and reconsideration of the application and allowance of the claims is respectfully requested.

The subject invention is directed to a method and to a device for threading in a leading end of a material web into a printing press using a web threading device, and for retracting the web threading device once the web has been threaded into the printing press. As may be seen in the sole drawing figure, a web of material is mounted on a reel changer, generally at 03. A leading end of the material web is connected to a threading device 06 and is drawn through a printing unit 02, through other elements of a printing press, generally at 01, and to the folding apparatus 05. The reel changer area is referred to as the material web receiving area. The folding apparatus area is referred to as the delivery area.

The threading device can be an endless loop or a discontinuous element, such as a tape. In either arrangement, there is provided a receiving area reel body 08 at the start of the threading device, and there is provided a delivery area reel body 07 at the delivery area. Each of these reel bodies is provided with its own separate drive motor. The receiving area reel body drive motor is identified at 21. The delivery area reel body

drive motor is identified at 11.

In the threading in of a leading end of a material web, it is very important that a uniform tension be maintained in the web. If the tension varies during the drawing in process, the material web may well rip or tear. Clearly, such a ripping or tearing of the web, during the draw-in process, would require the process to be restarted, after the torn material had been removed. In actual practice, large printing presses are complex, sophisticated machines that do not have a great deal of space in which to remove pieces of material. It is thus very important that the material web tension be maintained uniformly during the entire web draw-in process.

In the present invention, as described in the Substitute Specification, and as set forth in currently amended claim 27, there is provided a first web threading means drive motor in the web receiving area. There is also provided a second web threading means drive motor in the web delivery area. The first web threading means drive motor is torque controlled. The second web threading means drive motor is speed controlled. The Examiner is requested to review the discussion in the Substitute Specification, starting at paragraph 017. The speed controlled motor at the delivery end of the printing press effectively pulls the web threading means, and its associated material web leading end, through the printing press. In order to maintain a proper tension in the material web, the motor at the receiving area, which is at the start of the draw-in, is provided with a torque control. This first motor acts as a brake and resists the pulling force that is exerted on the web draw-in device by the second motor. The result is the imposition of the proper amount of tension on the material web, as it is being drawn through the printing press. If the first motor provided no torque control, the web could

be pulled through the printing press with too little tension exerted on it. That would result in the formation of "bags" or sagging portions of the material web along its path of travel through the printing machine. If the torque that is exerted by the first motor, and which resists the putting of the web threading means through the printing press were too great, the web threading means simply could not move. It is thus important that the speed control of the second motor at the web delivery area and the torque control of the motor at the web receiving area be controlled, in concert, to attain the proper tension control in the material web, as it is being drawn in. The Examiner is also requested to review the discussion at paragraphs 035 and 036 of the Substitute Specification.

Once the material web leading end has been drawn into the printing machine, from the receiving area to the delivery area, the web threading device is disconnected from the leading end of the web and is rewound. During this rewinding process, a different set of control parameters are applied to the two motors. These are discussed in paragraph 038 of the Substitute Specification and are set forth in currently amended claim 38. The first motor, which is in the receiving area, and to which area the threading device is to be rewound, is regulated at a first motor speed. That first motor speed is greater than the motor speed of the second motor which, is located in the delivery area. The speed of the second motor that is located in the delivery area, is controlled to operate at a variable speed. The drive motor in the receiving area runs at an increased speed and at a predetermined torque to insure that the web threading means is returned to the receiving area with a constant torque. The Examiner is requested to review the discussion at paragraph 038 in this regard.

In the second, non-final Office Action of December 17, 2008, the prior allowance

of claims 37, 38, 40-42 and 48 was withdrawn in view of the newly cited prior art. Claims 27, 29-32, 38-45 and 49-52 were rejected under 35 USC 103(a) as being unpatentable over US Patent No 4,280,669 to Leanna in view of US Patent No 6,010,091 to Leskinen. Claims 33-36 were rejected under 35 USC 103(a) as being unpatentable over Leanna in view of Leskinen and further in view of US Patent No 4,387,861 to Kampf. For the reasons to be set forth below, it is believed that all of the claims now pending in the subject application are patentable over the three references cited and relied on, taken either singly or in combination.

Claims 27, 38 and 43, the three independent claims now pending in the application, were all rejected on the basis that Leanna discloses "...a method for threading a material web in a web processing machine". It is initially to be noted that claims 27 and 38 are method claims. However, claim 43 is an apparatus claim. The method asserted as being disclosed in the Leanna reference is thus of questionable worth in a consideration of the apparatus set forth in claim 43. More importantly, the Leanna reference has nothing to do with a method or a device for threading a material leading end in a web processing machine, as will now be discussed.

Even a rather cursory reading of the Leanna reference quickly makes it evident that it is not particularly relevant to the subject invention. The Leanna device is directed to a rewinding device in which a large parent roll 6 of material is wound onto a plurality of small rolls. Specifically, the Leanna reference is directed to a device that is usable to form individual rolls of toilet tissue from a large parent roll.

In the discussion of the Leanna reference in the Office Action, it is asserted that the web receiving area is at 10 and the web delivery area is at 5. The Examiner has

reviewed these two areas. In the subject invention, the web receiving area is that area where a reel of paper, whose leading end is to be threaded through a printing machine, is placed on a reel stand. The somewhat comparable location in the Leanna device would be the parent roll stand 5. In the subject device, the web delivery area is that area where the now printed and formed web is folded; i.e. the folding apparatus 05. The Office Action indicates that the equivalent area in the Leanna patent is the parent roll stand 5. In fact, it would be the rewinding apparatus 10. Given this rather large error in the asserted application of the Leanna reference to the subject method and device, it is difficult for the undersigned to understand how the reference can be asserted as rendering the subject invention obvious.

In the discussion of the Leanna reference, it is recited that there is a web threading path extending between the web receiving area, which the Examiner has asserted is at 10, and the web delivery area, which the Examiner has asserted is at 5. In fact, the web 7 in Leanna is caused to travel from the area 5 to the area 10. The asserted web threading path recited in the Office Action is not correct. In fact, it is the reverse of the actual web travel path.

The asserted drive motor 87 at the asserted web receiving area 10 is actually a drive motor that is one of two which are each usable to rotate selected mandrels 22 on a turret 23. These mandrels 22 support cores 24 about which the toilet tissue is to be wound after it has been embossed in unit 9 and has been fed into the rewinding apparatus.

It is asserted in the Office Action that it is "understood" that there will be a motor at the web delivery area. Since the Examiner has reversed the two areas, it is assumed

that he is stating that there will be a motor to drive the parent roll which is supported on the parent roll stand 5 in the area which the Examiner incorrectly asserts is the web delivery area. In fact, the parent roll 6 is driven by a drive belt 6 which appears, in Fig. 1, to pass around a drive motor, which is unnumbered, but which is situated near the dancer roller 13.

The subsequent discussion in the rejection of claims 27, 38 and 43 is clearly the result of key word searching, without any thought being given to the context in which a term appears. It is asserted that column 10, line 15 of Leanna discloses "...regulating a first motor at a predetermined web threading speed." A review of that portion of the Leanna reference shows that what is really recited is that the dancer roller 13 is provided so that the parent roll 6 can rotate at a substantially fixed rate notwithstanding variations in the rate of advance of downstream portions of the web. That discussion has nothing to do with the subject invention. A dancer roller 13 acts to provide a reservoir of a web material to accommodate for changes in speed of the web being pulled off the supply roll and used in the rewinding apparatus.

In a similar fashion, it is asserted, in the Office Action at the top of page 3, that Leanna discloses the regulation of a second motor at a predetermined motor torque. Column 4, lines 19-43; column 7, lines 34-37 and column 19, lines 17-20 are relied on in support of this assertion. A review of these passages reveals that all three include the term "torque". Beyond that, they have nothing to do with the subject invention, as recited in claims 27 and 38. In Leanna, there is a discussion of maintaining constant torque on the web winding mandrel. Such mandrels are the ones which support the cores on which the individual rolls of toilet tissue are to be wound. That has nothing to

do with a motor which is usable to control the feeding out or the retracting of a material web leading end threading device.

With respect to claim 43, it is asserted that Leanna discloses at least one mechanically independent assembly at 119. That element is a pulse generator which is usable to determine a number of revolutions of a bed roll 18. That bed roll 18 is part of the rewinding apparatus shown generally at 10. Again, the portion of the Leanna reference seized on by the Examiner has nothing to do with the structure of the subject invention, as recited in currently amended claim 43. In a similar manner, the Office Action asserts that column 22, lines 46-60 discloses the existence of a virtual rotational axis for the machine and being usable to transmit speed relevant signals.

A virtual rotational axis is an imaginary rotating shaft that is usable to synchronize or to coordinate rotational phases of a machine with a number of rotating components. It is a replacement for the main drive shaft, which, at one time, was used to drive all of the rotating components in a printing press. With the advent of individual motors for various components, the virtual rotational axis was established as a way for providing a reference point to synchronize and to control a plurality of rotating elements. The discussion in the Leanna reference with respect to the pulse generator 119, and its connection to a bed roller 18 is not relevant to the subject invention, as recited in currently amended claim 43.

The secondary reference to Leskinen is relied on to show a method and a device for threading a paper web through a winding machine. In this device there is provided a roll of paper at an unwind station 10. The unwind station 10 supports a paper reel 12 from which is unwound a paper web W. That web is directed to a slitter-winder 30.

Thus, the Leskinen device is generally similar to the Leanna device in that a supply roll is slit into a plurality of various webs which are rerolled onto small cores.

As is depicted in Figs. 5A and 53 of Leskinen, a threading bar 21 is pulled through the machine by a plurality of tapes or drawer fabrics 25. These several drawer fabrics 25 are connected to the threading bar 21 across its width. A winding shaft 32 is provided for the drawer fabrics 25. The winding shaft 32 is schematically depicted in Fig. 4 and is located someplace at the end of the machine remote from the unwinding station 10.

As is discussed at column 5, starting at line 44, the threading bar 21 is brought to its start position near the paper reel 12 by chains 61. These chains run in a chain track 62. Once the web leading edge is connected to the threading bar 21, that bar is pulled along the web travel path by winding of the draw fabric 25 on the shaft 32. During this process, the reel 12 is caused to rotate at a substantially constant speed.

A draw tension is exerted on the threading bar 21 by the draw fabrics. This is discussed at column 6, starting at line 6. This draw tension is controlled by a known device which is also usable to control a web tension in the web, as the web is wound off the paper reel. Such a tension is controlled by the use of the drive gear for the draw fabric 25. In other words, the tension in the web, as the web is being drawn into the slitter-winder 30, is controlled by control of the tension exerted on the draw fabrics 25.

The combination of the Leanna and Leskinen references would not result in a device, or in its method of operation that would render claims 27, 38 or 43 of the subject application unpatentable. If the Leskinen threading device were to be incorporated into the Leanna device, it would operate in exactly the same manner as it does in the

Leskinen device. Its combination with Leanna is superfluous since Leanna does not teach anything about the structure or the method of operation of a material web leading end draw-in or threading device.

Leskinen does not disclose two separate drive motors at the two ends of the web threading device. The threading bar 12 is pulled from start to finish by a plurality of tapes which are wound onto a winding shaft 32. The threading bar 21 is returned to its start position by chains 61 that run in a track 62. It is assumed that these chains 61 are driven by a motor. However, there is no discussion of any drive for these chains except for a single reference to a separate drive gear, at column 5, line 50. The method of the subject invention, as recited in claims 27 and 38 is the control of the rotational speeds and torques of the two motors at the ends of the web threading path to maintain a constant tension in the web, as recited in claim 27, and to regulate the speed at which the rewinding of the web threading means occurs, as recited in claim 38. Leskinen has no discussion of any method, or device for accompanying such controls. It is thus clear that the combination of Leanna and Leskinen will not render obvious the methods recited in claims 27 and 38.

With respect to claim 43, as was discussed previously, the patent to Leanna has no teaching of a virtual rotational axis, or of an electronic guide axis, as is set forth in the Substitute Specification, and as is recited in currently amended claim 43. The other feature of claim 43, such as torque control of one motor for the speed control of the other motor is also neither described, or suggested in the Leskinen reference. Accordingly, this secondary reference cannot supply the limitations of claim 43, which are clearly not present in the Leskinen reference.

All of the rest of the claims currently pending in the subject application depend from one of the three believed allowable independent claims. These claims are thus also believed to be allowable.

The additional prior art cited and discussed in the Office Action of December 17, 2008 has been noted. Since it was not applied against any of the claims, no further discussion thereof is believed to be required.

In a review of the Substitute Specification, during the preparation of the current Second Amendment, two minor issues were noted in paragraph 011. These have been corrected without the addition of new matter. Their entry is respectfully requested.

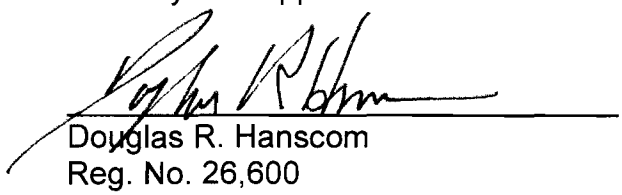
SUMMARY

The Substitute Specification has been amended without the entry of any new matter. The three independent claims now pending in the application have been amended to more clearly patentably define the subject invention. It is believed that all of the claims which are now pending in the subject application are patentable over the prior art cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

Wolfgang FISCHER et al.
Applicants

JONES, TULLAR & COOPER, P.C.
Attorneys for Applicant



Douglas R. Hanscom
Reg. No. 26,600

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JONES, TULLAR & COOPER, P.C.
P.O. Box 2266 Eads Station
Arlington, Virginia 22202
(703) 415-1500
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